PATENT CLAIMS

1. A method of nanofibres production from a polymer solution (2) using electrostatic spinning in an electric field created by a potential difference between a charged electrode (30) and a counter electrode (40) , in which the polymer solution (2) is for spinning into the electric field supplied by means of the surface of a rotating charged electrode (30) which is by a part of its surface immersed in a polymer solution, characterized by that the polymer solution (2) is supplied into the electric field for spinning using the surface of the rotating charged electrode (30) which is created with a body elongated in a direction its rotational axis, which is perpendicular to the movement direction of a device (7) for nanofibres storage and together is parallel to the plane of this device (7), while on a part of the circumference of the charged electrode (30) near to the counter electrode (40) is a spinning surface created, from which the nanofibres (8) formed by the action of the electric field from the conductive polymer solution (2) are drifted towards the counter electrode (40) and in front of it they are stored on a device (7) for nanofibres storage and they form a layer on the device by which is a high spinning capacity reached.

2. A method as claimed in Claim 1, characterized by that the charged electrode (30) is created with a cylinder (3).

3. A method as claimed in Claim 1 or 2, characterized by that an air stream acts on nanofibres (8) moving in the space between the charged electrode (30) and the counter electrode (40), which promotes the nanofibres (8) to drift away of the charged electrode (30).

4. A method as claimed in Claim 3, characterized by that the nanofibres (8) are by an air stream drift away towards the counter electrode (40) before which they lay down onto the device (7) for nanofibres storage and form a layer on it.

5. A method as claimed in Claim 4, characterized by that the air stream is produced by sucking of the air from the space between the electrodes (30, 40) into the space behind the counter electrode (40).

6. A method as claimed in Claim 3, characterized by that the nanofibres are by the air stream deflected from their course towards the counter electrode (40) and are led to the device (7) for nanofibres storage pervious to air, onto which surface they are stored in a layer in a space out of reach of the electric field between the electrodes (30, 40) where they were produced.

7. A method as claimed in Claim 6, characterized by that the air stream is produced by sucking of the air from the space between the electrodes (30, 40) into the space behind the device (7) for nanofibres storage pervious to air in regard of the charged electrode (30).

8. A method as claimed in any of Claims 4, 5, 6 or 7, characterized by that into the space where the nanofibres are drift away is an auxiliary drying air (9) supplied.

9. A method as claimed in Claim (8), characterized by that at least a part of the auxiliary drying air (9) is drawn off the space in front of the device (7) for nanofibres storage pervious to air in regard of the charged electrode (30), without passing through this device (7).

10. A method as claimed in any of Claims 3 to 9, characterized by that at least an auxiliary drying air (9) is heated up before entering the space where the nanofibres (8) are drift away.

11. A device for nanofibres production from the polymer solution (2) using electrostatic spinning in an electric field created by a potential difference between the charged electrode (30) and the counter electrode (40), while the charged electrode (30) is pivoted and by a part of its circumference it is immersed in the polymer solution (2), while against the free part of the circumference of the charged electrode (30), there is the counter electrode (40) positioned, characterized by that the pivoted charged electrode (30) is created with a body elongated in a direction of its rotational axis, which is perpendicular to the movement direction of the device (7) for nano fibres storage and together is parallel to the plane of this device (7).

12. A device as claimed in Claim 11 **characterized by that** the counter electrode (30) is a cylinder (3).

13. A device as claimed in Claim 12 **characterized by that** the cylinder (3) is on its circumference fitted with lugs (31) and/or recesses (32).

14. A device as claimed in Claim 11 **characterized by that** the counter electrode (30) is a prism.

15. A method as claimed in any of 11 to 14, characterized by that the free parts of the circumference of the charged electrode (30) along its entire length is surrounded with a counter electrode (40) .

16. A device as claimed in any of Claims 11 to 15, characterized by that the device (7) for nanofibres storage is situated between electrodes (30, 40) and is pervious to air, while the space behind this device (7) in regard to the charged electrode (30) is connected to the vacuum source (6) serving to create an air stream directing out of the space between the electrodes (30, 40) towards this device (7).

17. A device as claimed in 16, characterized by that the vacuum source (6) is connected with the space behind the counter electrode (40) pervious to air in regard to the charged electrode (30).

18. A device as claimed in Claim 11, characterized by that outside of the space between the electrodes (30, 40) is positioned the device (7) for nanofibres storage pervious to air, while the space behind this device (7) in regard to the charged electrode (30) is connected to the vacuum source (6) serving to create an air stream directing towards this device (7).

19. A device as claimed in any of Claims 16 to 18, characterized by that the device (7) for nanofibres storage is composed of a conveyor (71) pervious to air.

20. A device as claimed in any of Claims 16 to 18, characterized by that the device (7) for nanofibres storage is composed of a plane supporting material of the nanofibres (72).

21. A device as claimed in Claim 20, characterized by that the plane supporting material (72) is positioned on a conveyance (41).

22. A device as claimed in Claim 21, characterized by that the conveyance (41) is composed of a counter electrode (40).

23. A device as claimed in Claim 21, characterized by that the conveyance (41) is composed of stretching elements (42) of plane supporting material (72) of the nanofibres.

24. A device as claimed in any of Claims 16 to 23, characterized by that into the space between the electrodes (30, 40) leads an inlet (90) of auxiliary drying air (9).

25. A device as claimed in Claim 24, characterized by that in the inlet (90) of auxiliary drying air (9), there is positioned an air heating device (91).

26. A device as claimed in Claim 24 or 25, characterized by that at least a part of air is drawn off the space in front of the device (7) for nanofibres storage in regard of the charged electrode (30), without passing through this device (7).